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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,285	03/16/2004	Vijayalakshmi R. Ravcendran	030065	3631

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QUALCOMM INCORPORATED  
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EXAMINER

RASHID, DAVID

ART UNIT	PAPER NUMBER
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2624

NOTIFICATION DATE	DELIVERY MODE
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11/16/2007

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us-docketing@qualcomm.com  
kascanla@qualcomm.com  
nanm@qualcomm.com

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

10/802,285

Applicant(s)

RAVEENDRAN ET AL.

Examiner

David P. Rashid

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**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 26 October 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
- Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ They raise the issue of new matter (see NOTE below);
- (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
- The status of the claim(s) is (or will be) as follows:
- Claim(s) allowed: \_\_\_\_\_.
- Claim(s) objected to: 4-12, 16-21 and 37.
- Claim(s) rejected: 1-3, 13-15, 31-36 and 38-42.
- Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: refer to attachment.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_
13. ☐ Other: \_\_\_\_\_.

**Attachment to Paper 20071107**

Applicant's arguments filed 10/26/2007 with respect to claims 1 – 3, 13 – 15, 31 – 36, and 40 have been respectfully and fully considered, but they are not found persuasive.

**Summary of Remarks regarding claims 1 – 3, 13 – 15, and 31 – 35:**

- (i) Applicant argues in view of the explicit teachings of Thyagarajan, there is no determination "whether the two neighboring blocks are both subdivided," as recited in claim 1. More importantly, there is no such determination for the purpose of performing deblocking filtering (*@ response page 11*).
- (ii) Applicant argues Frishman teaches away from Applicant's claimed invention of "performing deblocking filtering on one or more edge pixels of the two neighboring blocks", after determining that both of the two neighboring blocks" are not subdivided," as recited in claim 1. In the claimed invention, if an edge is determined to be filtered, the pixels around this edge are NOT typically smooth. Therefore, the combined teachings of Fishman and Thyagarajan do not lead to the claimed invention because Frishman does not intend to filter edges (*@ response page 12*).
- (iii) Applicant argues Frishman does not mention subdividing or a determination of subdividing. Applicant also observes that in the Examiner's characterization of Frishman, Frishman determines whether to perform deblocking filtering based on one criterion, a block boundary classification. Not only do Thyagarajan and Frishman fail to teach two different determinations to determine whether to filter or not, Thyagarajan and Frishman also fail to teach

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the same criteria used by Applicant. As can be readily seen, Frishman does not teach 1) deblocking filtering of "edge pixels" (or edges); and 2) deblocking filtering when the blocks "are not subdivided." Thus, Frishman cannot be relied upon for deblocking filtering in the manner as claimed by Applicant. Furthermore, any additional modifications to the combination of Thyagarajan and Frishman would destroy the intended operation thereof derived from such a combination since Frishman does not filter edges. Accordingly, the combined teachings of Thyagarajan and Frishman do not lead to the invention recited in independent claim 1 (@ *response page 12*).

(iv) Applicant argues that claims 2-12 depend directly or indirectly from independent claim 1; claims 14-21 depend directly or indirectly from claim 13; claims 32-33 depend directly or indirectly from claim 31; and claims 35-42 depend directly or indirectly from claim 34.

Therefore, the combination of Thyagarajan and Frishman fails to disclose or suggest at least one element of each of the dependent claims 2-12, 14-21, 32-33 and 35-42 at least by virtue of their dependency from claims 1, 13, 31 and 34. Furthermore, Applicant believes that many of the dependent claims 2-12, 14-21, 32-33 and 35-42 recite features that are clearly lacking from the applied references, and do not acquiesce to any of the rejections. In view of the foregoing, Applicant respectfully requests that the rejection of claims 1-3, 13-15 and 31-35 under 35 U.S.C 103(a) as being unpatentable over Thyagarajan in view of Frishman be withdrawn (@ *response pages 12 - 13*).

**Examiner's Response regarding claims 1 – 3, 13 – 15, and 31 – 35:**

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(i) However, Thyagarajan does in fact anticipate "whether the two neighboring blocks are both subdivided" as recited in claim 1. Taking FIG. 2A for which Thyagarajan's algorithm performs FIG. 2B for each block adjacent to block 410 in FIG. 2A as disclosed in paragraph [0033]. This ultimately is equivalent in deciding whether two neighboring blocks (e.g. block 408 and 410 of FIG. 2A) are both subdivided when performing FIG. 2B which includes determining sub-blocks within each block in element 472 of FIG. 2B.

(ii) However, Frishman does not teach away from Applicant's claimed invention of "performing deblocking filtering on one or more edge pixels of the two neighboring blocks". Frishman discloses that after determining that both of the two neighboring blocks are not of a particular classification (in this case "non-block" and "blocky" as shown in FIG. 5), the block may undergo deblocking filtering on one or more edge pixels of the two neighboring blocks (if it has been determined "blocky" by performing steps 152, 154, and 156 in FIG. 5). The Applicant asserts that no edge block is included in the filtering process of Frishman and hence teaches away from the Applicant's claimed invention. However, Frishman does in fact teach in multiple occurrences that the edge pixels are included in the region of interest (ROI) to be filtered, as indicative in FIG. 7 "Filtered pixels ROI" that include pixels  $P_8$  and  $P_9$  (which are direct edge pixels). More detail of this is in paragraphs [0068] and [0069].

(iii) However as shown in the anticipation of Thyagarajan in view of Frishman, though Thyagarajan does not teach performing deblocking filtering on one or more edge pixels of the two neighboring blocks, after determining that both of the two neighboring blocks are not subdivided, Frishman teaches performing deblocking filtering on one or more edge pixels of the two neighboring blocks, after determining that both of the two neighboring blocks are not of a

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particular classification (“blocky” or “non-blocky”). It would have been obvious to one of ordinary skill in the art at the time the invention was made for the method of processing images compressed using block based compression of Thyagarajan to include performing deblocking filtering on one or more edge pixels of the two neighboring blocks, after determining that both of the two neighboring blocks are not of a particular classification as taught by Frishman, and it would have been obvious to one of ordinary skill in the art at the time the invention was made for the classification of Thyagarajan in view of Frishman to be “subdividing determination/classification” as already calculated by Thyagarajan as it “...provides a robust and picture-content dependent solution for removing the blocking artifact without reducing the quality or sharpness of the processed picture, and may be implemented efficiently in software and in hardware.”, Frishman, paragraph [0002].

(iv) However as described above, claims 1, 13, 31 and 34 are also anticipated by the combination of Thyagarajan and Frishman with an equivalent argument. The combination of Thyagarajan and Frishman does not fail to disclose or suggest at least one element of each of the dependent claims 2-12, 14-21, 32-33 and 35-42 at least by virtue of their dependency from claims 1, 13, 31 and 34.

**Summary of Remarks regarding claims 36 and 40:**

The references to Tan and Varma are not relied upon for any of the deficiencies in the combination of Thyagarajan in view of Frishman asserted by Applicant above. Accordingly, Tan and Varma do not cure the deficiencies of Thyagarajan as modified by Frishman, and one

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ordinarily skilled in the art would not have been led to modify the references to attain the claimed subject matter.

**Examiner's Response regarding claims 36 and 40:**

However, it has been shown above that Thyagarajan in view of Frishman does in fact anticipate the claims mentioned above. The references to Tan and Varma do not need to cure any deficiencies of Thyagarajan in view of Frishman, as there are no deficiencies of Thyagarajan in view of Frishman.



BRIAN WERNER  
SUPERVISORY PATENT EXAMINER

/David P. Rashid/  
Examiner, Art Unit 2624